



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,698	02/16/2005	Robert Zhong Lu	102792-420 (11031P3)	1602
27389	7590	06/01/2006	EXAMINER	
NORRIS, MCLAUGHLIN & MARCUS			BOYER, CHARLES I	
875 THIRD AVE			ART UNIT	
18TH FLOOR			PAPER NUMBER	
NEW YORK, NY 10022			1751	

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/524,698	Applicant(s) LU ET AL.	
	Examiner Charles I. Boyer	Art Unit 1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☒ Claim(s) 17-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is responsive to applicants' amendment and response received March 12, 2006. Claims 1-19 are currently pending.

Claim Objections

1. Claim 19 is objected to because of the following informalities: The claim is improperly numbered as claim 14. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The cationic surfactants of claim 8, as broadly defined, allows for compounds outside of the cationic surfactants defined in claim 1, from which claim 8 depends. It is not clear if applicants are referring to the cationic compounds already disclosed in claim 1, or yet another cationic surfactant in the mixture.

Claim Rejections - 35 USC § 102

1. All prior art rejections under 35 U.S.C. 102(b) are withdrawn in view of applicants' amendment and response.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginn, US 4,348,292.

Ginn teaches a detergent composition comprising two separate layers, one layer containing a surfactant and the other a builder (see abstract). An example of such a composition comprises 14% nonionic surfactant, 1% betaine surfactant, 0.9% of a mixture of alkyldimethylbenzylammonium chlorides, and citric acid when the composition is used in a ratio of 2:8 surfactant layer to builder layer (col. 5, example III in view of col. 4, lines 59-61, wherein the volume ratio of surfactant layer to builder layer ranges between 1:9 to 9:1). Note that anionic surfactants are suitable surfactants of the invention (col. 3, lines 1-15), and the surfactants of the invention may be present in concentrations as low as 50% in the surfactant layer (col. 3, lines 51-59). The reference does not specifically teach a volume ratio of the upper aqueous phase to the lower aqueous phase between 20:80 - 80:20, which still maintains a nonionic surfactant concentration between 0.01 and 10%, however, as lower amounts of surfactant are contemplated by the reference (a 20:80 surfactant to builder ratio with a 50% surfactant concentration in the surfactant layer will result in 10% surfactant for the overall

Art Unit: 1751

composition), such concentrations are obvious design choices to persons of ordinary skill in the art, based on the teachings of the reference.

Applicants traversed this rejection when it was applied as a 102 reference on the grounds that the surfactant layer of Ginn is not an aqueous layer, and the compositions of Ginn fail to teach or suggest any germicidal properties or activities provided by his compositions. The examiner acknowledges that the amount of water present in the surfactant layer of the reference may be less than applicants envisioned in their composition. However, the mere mention of the term "aqueous" without setting forth a specific amount of required water, cannot be considered novel over a composition which contains water, albeit in minor amounts. With respect to the composition of Ginn not exhibiting germicidal properties, it is well known that the alkylbenzylammonium cationic surfactants are among the most common germicides used in detergent compositions. The examiner maintains therefore, that the composition of example III, having germicides therein, satisfies this claim limitation.

4. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endlein et al, US 6,720,300.

Endlein et al teach a detergent composition comprising two aqueous phases containing a surfactant and electrolyte (see abstract). An example of such a composition is a disinfectant composition comprising 0.9% amphoteric surfactant, 3.75% sodium sulfate/sodium carbonate, 2% ethoxylated alcohol, 2% didecyldimethylammonium chloride, and 0.5% additional cationic surfactant (col. 7, example XIII). Note that an alkylbenzylammonium cationic surfactant is a preferred

Art Unit: 1751

germicide of the invention (col. 7, example XI). The reference does not specifically teach a mixture of cationic surfactants as presently claimed. First, as both didecyldimethylammonium chloride and alkylbenzylammonium chloride are taught as preferred germicides of the invention, the examiner maintains using a mixture of these germicides is an obvious design choice to one of ordinary skill. Furthermore, the examiner notes that these cationic germicides are used interchangeably and synonymously in the art. In fact, a mixture of these germicides is widely available in several commercially available cationic germicides under the tradenames BTC and Bardac. The examiner maintains therefore, that the mixture claimed is an obvious variant over any cationic germicide, as such mixtures are so well-known in the art as commercially available germicides.

Applicants traversed this rejection when it was applied as a 102 reference on the grounds that the reference does not teach applicants' mixture of cationic surfactants, and the composition of the reference does not exhibit germicidal properties. The cationic mixture issue is discussed above, and as these are disinfectant compositions, the examiner maintains the germicidal claim limitation is satisfied.

5. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeschke et al, US 6,440,924.

Jeschke et al teach aqueous multiphase detergents with immiscible aqueous phases (see abstract). An example of such a composition contains two continuous

Art Unit: 1751

phases comprising 4% anionic surfactant, 3% nonionic surfactant, and 10% sodium chloride/sodium gluconate (col. 7, example E5). The compositions of the invention may contain mixtures of anionic, cationic, amphoteric, and nonionic surfactants (col. 3, lines 50-53) and the cationic surfactants are germicidal, and are selected from didecyldimethylammonium chloride, alkylbenzyltrimethylammonium chloride, and mixtures thereof, and are present in amounts as high as 5% (col. 5, lines 42-51). Note that these compositions form two phases, an upper aqueous phase which contains the surfactants, and a lower aqueous phase which contains the builder, i.e. electrolyte, in preferred ratios of 75:25 to 25:75 (col. 8, claim 9). Jeschke et al do explicitly teach applicants' combination of surfactants, however, as mixtures of surfactants, including mixtures of didecyldimethylammonium chloride and alkylbenzyltrimethylammonium chloride germicidal surfactants are contemplated by the reference, it would have been obvious to one of ordinary skill in the art to add such a germicide mixture to example E5 and so meet the material limitations of the claims at hand. Furthermore, the examiner notes that these cationic germicides are used interchangeably and synonymously in the art. In fact, a mixture of these germicides is widely available in several commercially available cationic germicides under the tradenames BTC and Bardac. The examiner maintains therefore, that the mixture claimed is an obvious variant over any cationic germicide, as such mixtures are so well-known in the art as commercially available germicides.

Applicants traversed this rejection when it was applied as a 102 reference on the grounds that the reference does not teach applicants' mixture of cationic surfactants,

and the composition of the reference does not exhibit germicidal properties. The cationic mixture issue is discussed above, and as the cationic surfactants of the reference are well-known germicides, the examiner maintains the germicidal claim limitation is satisfied.

6. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meine et al, US 6,689,223.

Meine et al teach aqueous multiphase detergents with immiscible aqueous phases (see abstract). An example of such a composition contains two continuous phases comprising 1% anionic surfactant, 5% nonionic surfactant, and 7% citric acid wherein ratio by volume of aqueous phases is 45:55 (col. 15, example E1). The compositions of the invention may contain mixtures of anionic, cationic, amphoteric, and nonionic surfactants (col. 3, lines 50-60) and the cationic surfactants are germicidal, and are selected from didecyldimethylammonium chloride, alkylbenzyldimethylammonium chloride, and mixtures thereof, and are present in amounts as high as 5% (col. 6, lines 31-40). Meine et al do explicitly teach applicants' combination of surfactants, however, as mixtures of surfactants, including mixtures of didecyldimethylammonium chloride and alkylbenzyldimethylammonium chloride germicidal surfactants are contemplated by the reference, it would have been obvious to one of ordinary skill in the art to add such a germicide mixture to example E1 and so meet the material limitations of the claims at hand. Furthermore, the examiner notes that these cationic germicides are used interchangeably and synonymously in the art. In fact, a mixture of these germicides is

Art Unit: 1751

widely available in several commercially available cationic germicides under the tradenames BTC and Bardac. The examiner maintains therefore, that the mixture claimed is an obvious variant over any cationic germicide, as such mixtures are so well-known in the art as commercially available germicides.

Allowable Subject Matter

7. Claim 16 is allowed. Though amphoteric surfactants are taught in the prior art relied upon above, the specific amphoterics of claim 16 are not taught by the art.

8. Claims 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any


Art Unit: 1751

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles I. Boyer whose telephone number is 571 272 1311. The examiner can normally be reached on M-Th 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on 571 272 1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Charles I Boyer
Primary Examiner
Art Unit 1751